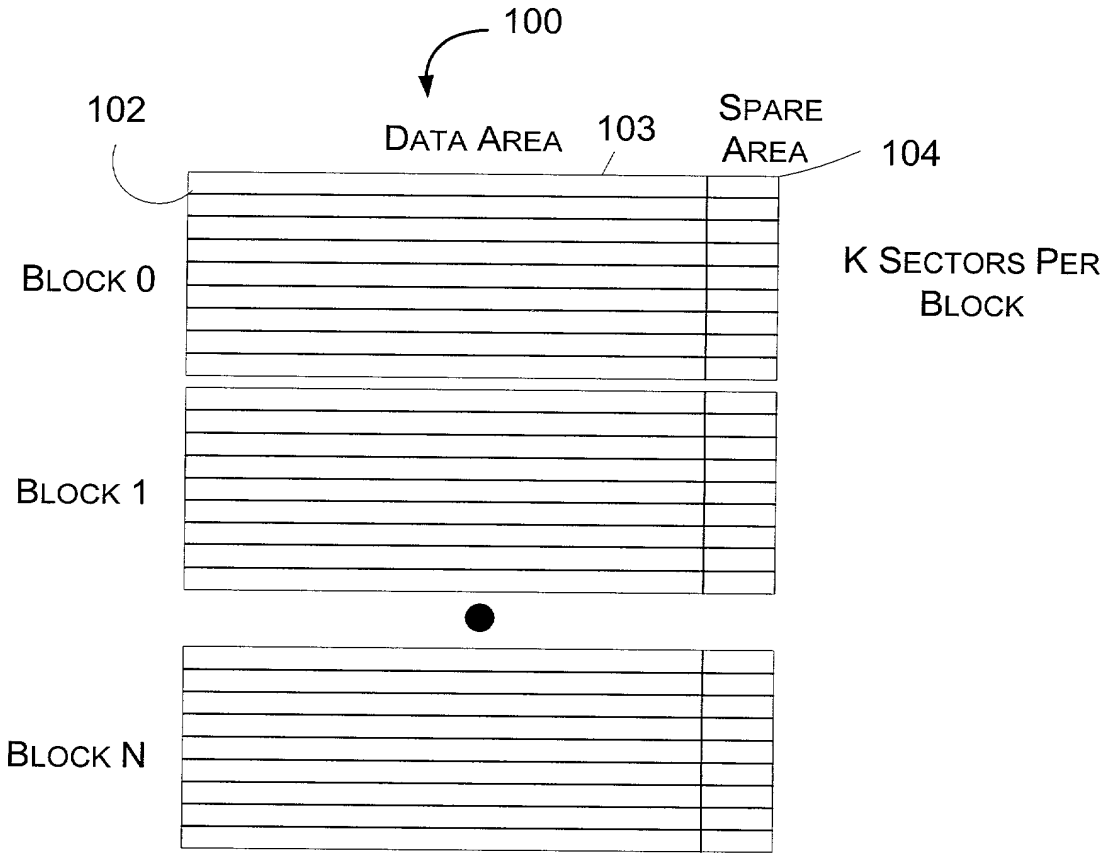
100
102
DATA AREA
103
SPARE AREA
104
BLOCK 0
K SECTORS PER BLOCK
BLOCK 1
BLOCK N

Fig. 1

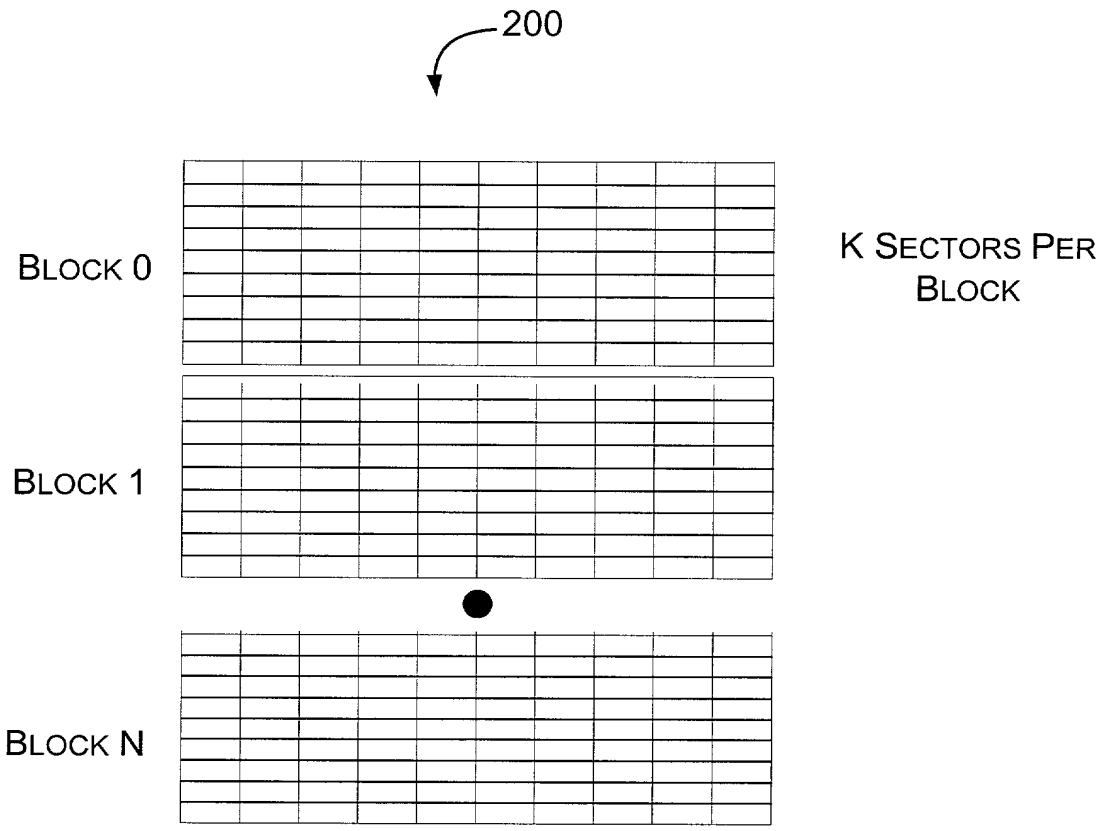

Fig. 2

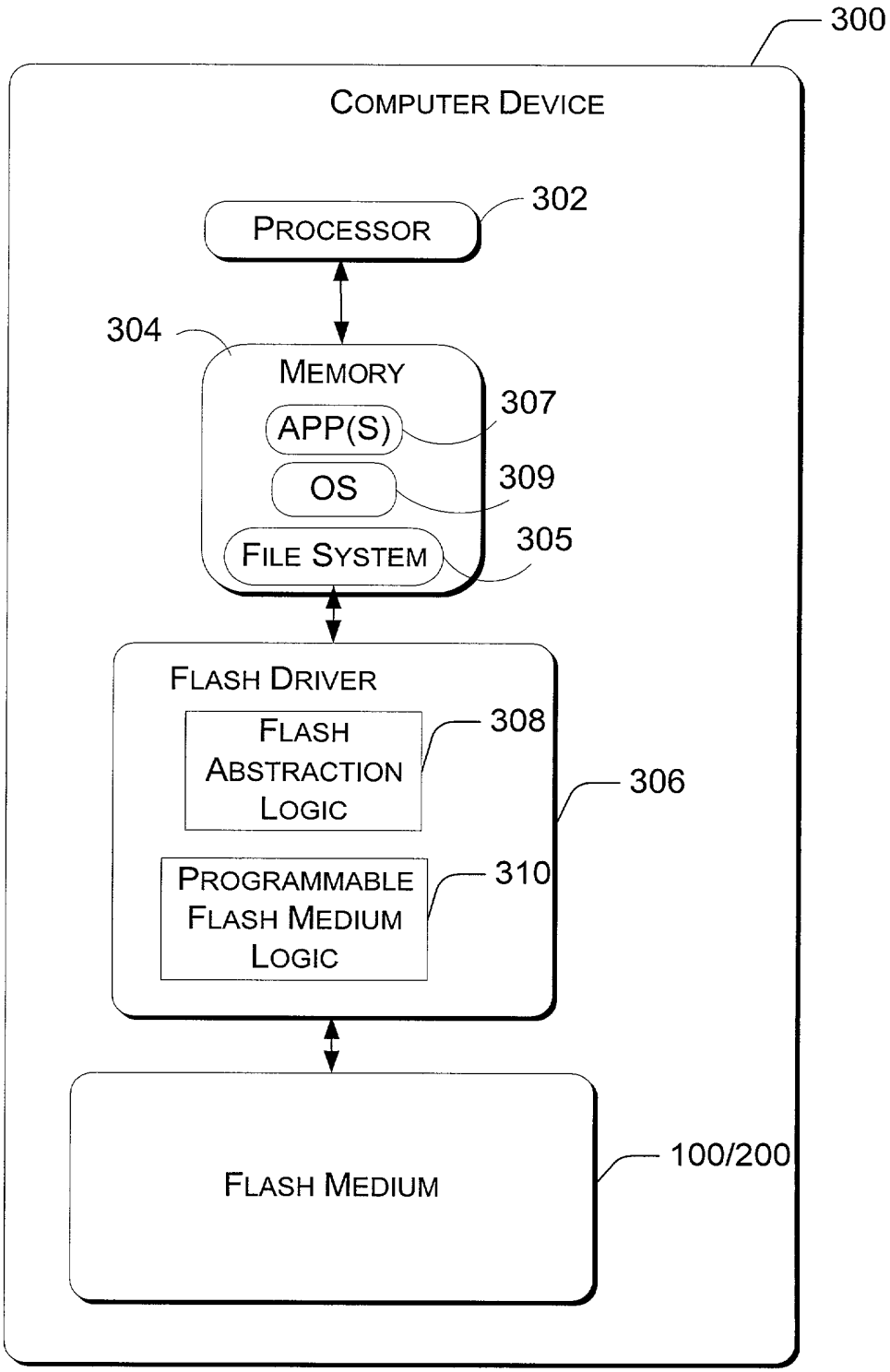
300
COMPUTER DEVICE
PROCESSOR
302
304
MEMORY
APP(S)
307
OS
309
FILE SYSTEM
305
FLASH DRIVER
FLASH ABSTRACTION LOGIC
308
306
PROGRAMMABLE FLASH MEDIUM LOGIC
310
FLASH MEDIUM
100/200

Fig. 3

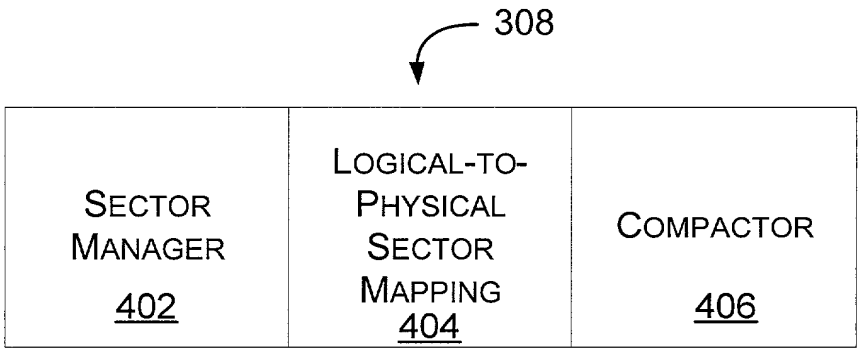

Fig. 4

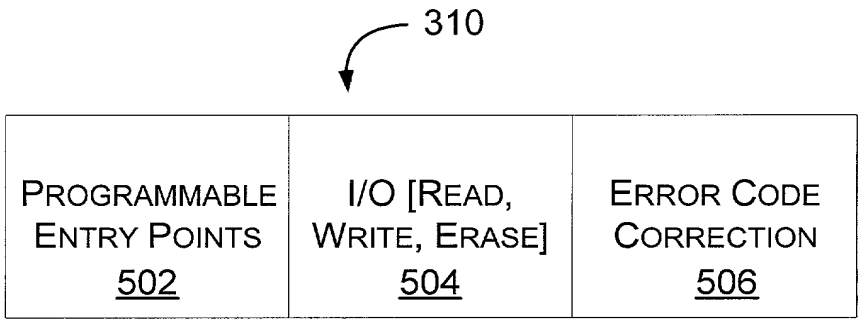

Fig. 5

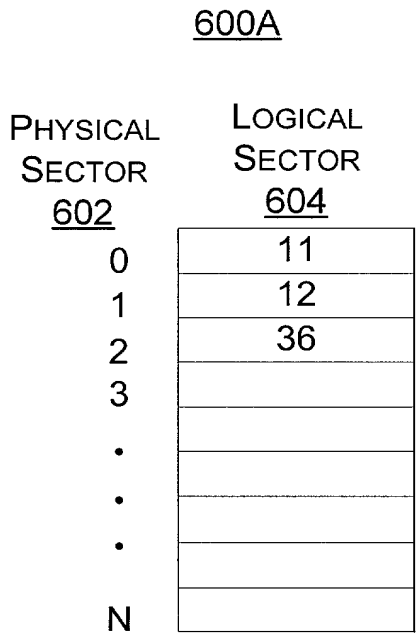

Fig. 6A

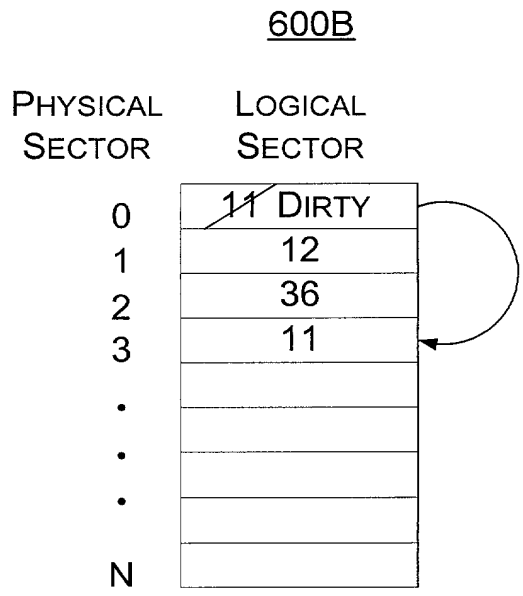

Fig. 6B

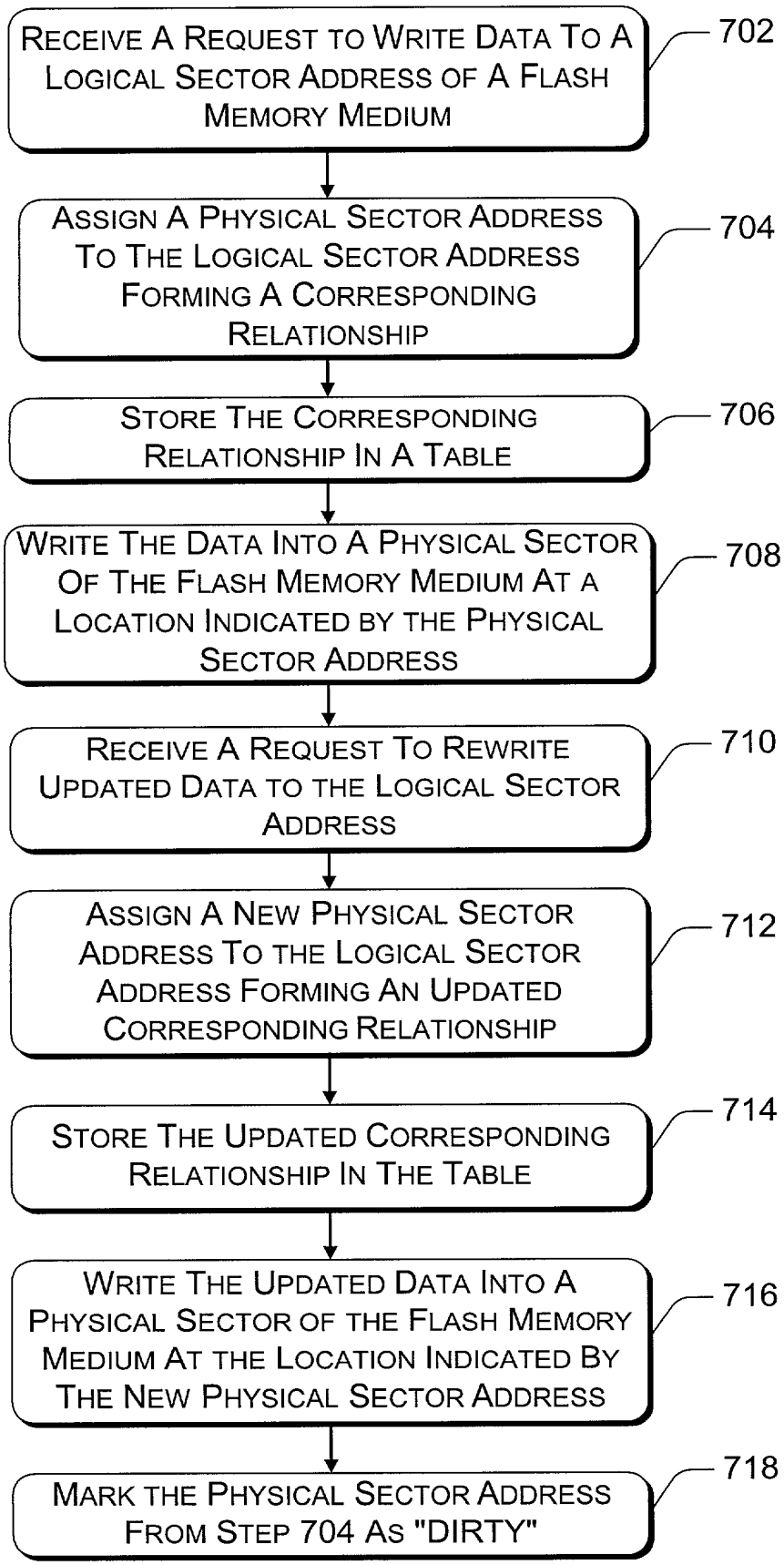

Fig. 7

20220220-T52780OL

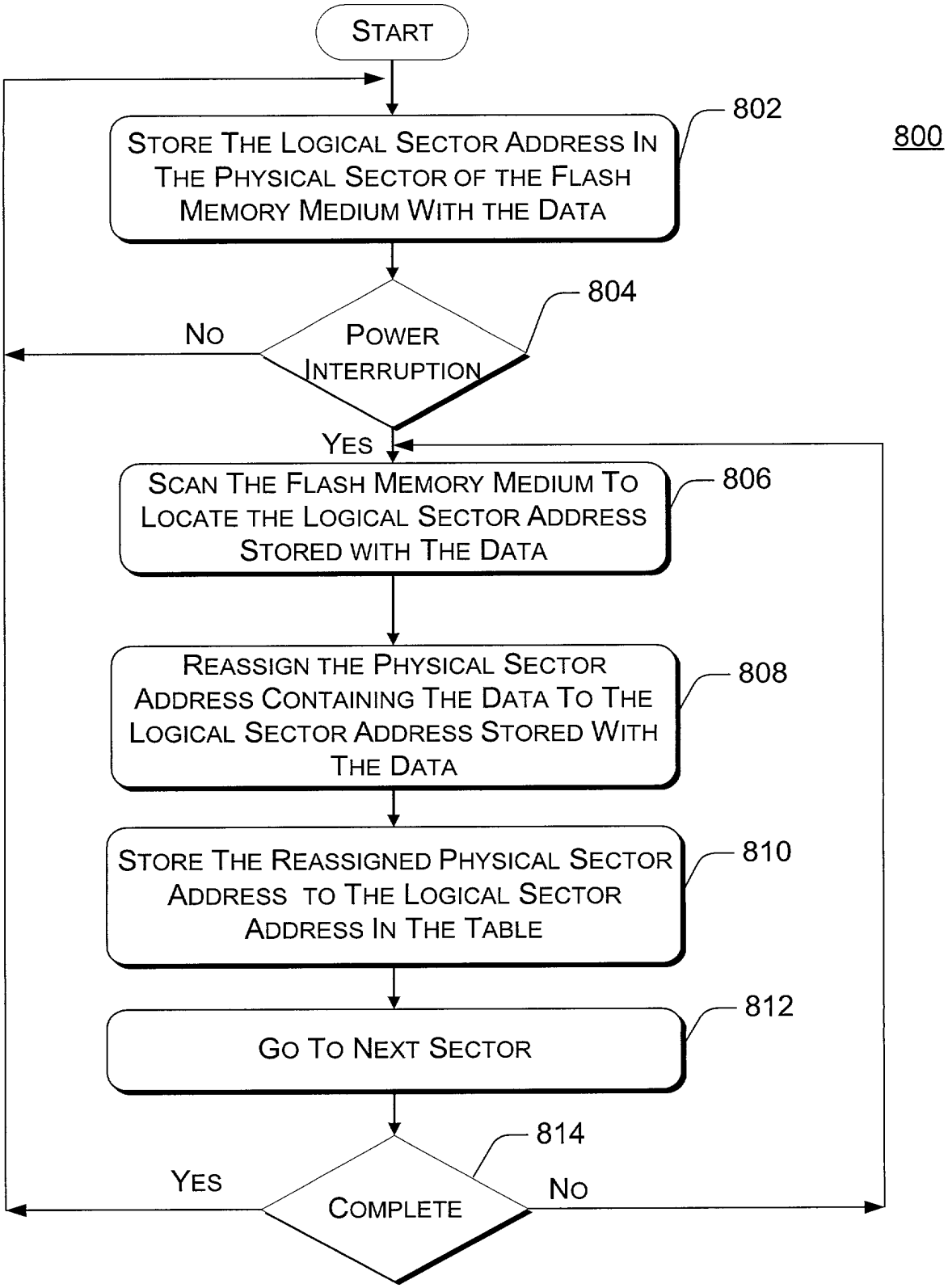
START
STORE THE LOGICAL SECTOR ADDRESS IN THE PHYSICAL SECTOR OF THE FLASH MEMORY MEDIUM WITH THE DATA
802
800
POWER INTERRUPTION
804
NO
YES
SCAN THE FLASH MEMORY MEDIUM TO LOCATE THE LOGICAL SECTOR ADDRESS STORED WITH THE DATA
806
REASSIGN THE PHYSICAL SECTOR ADDRESS CONTAINING THE DATA TO THE LOGICAL SECTOR ADDRESS STORED WITH THE DATA
808
STORE THE REASSIGNED PHYSICAL SECTOR ADDRESS TO THE LOGICAL SECTOR ADDRESS IN THE TABLE
810
GO TO NEXT SECTOR
812
COMPLETE
814
YES
NO

Fig. 8

20/22/20 - 15224807.1

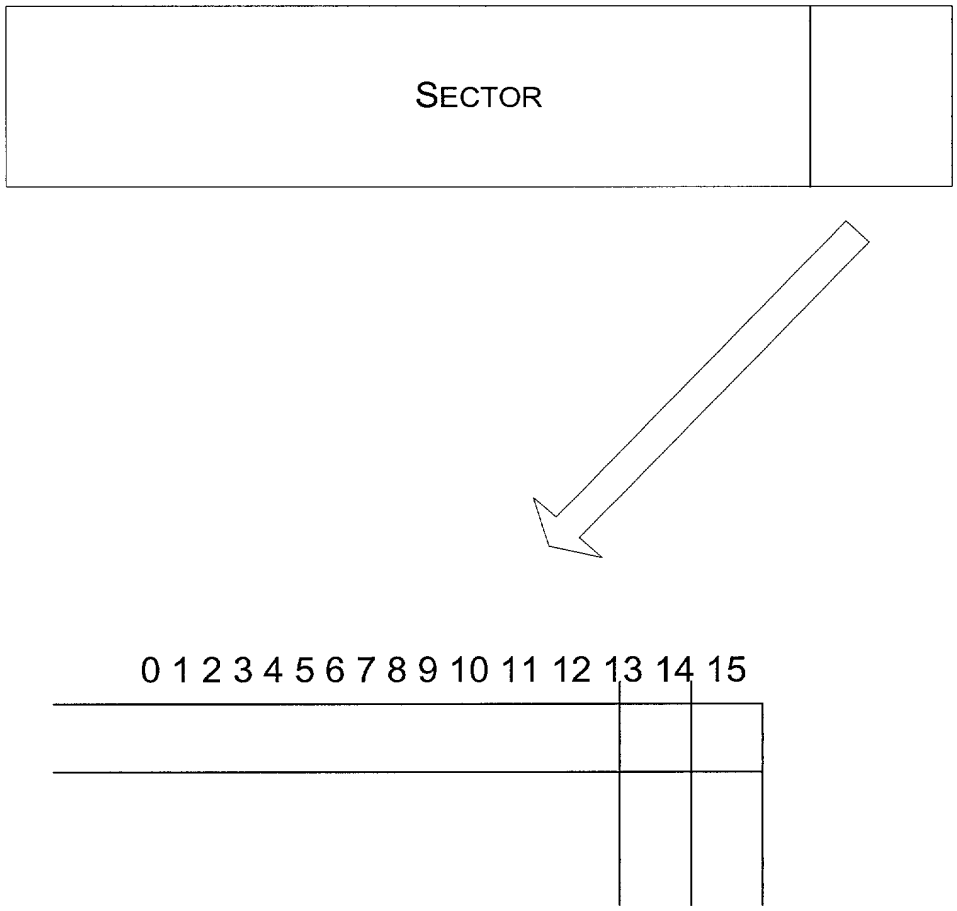

Fig. 9

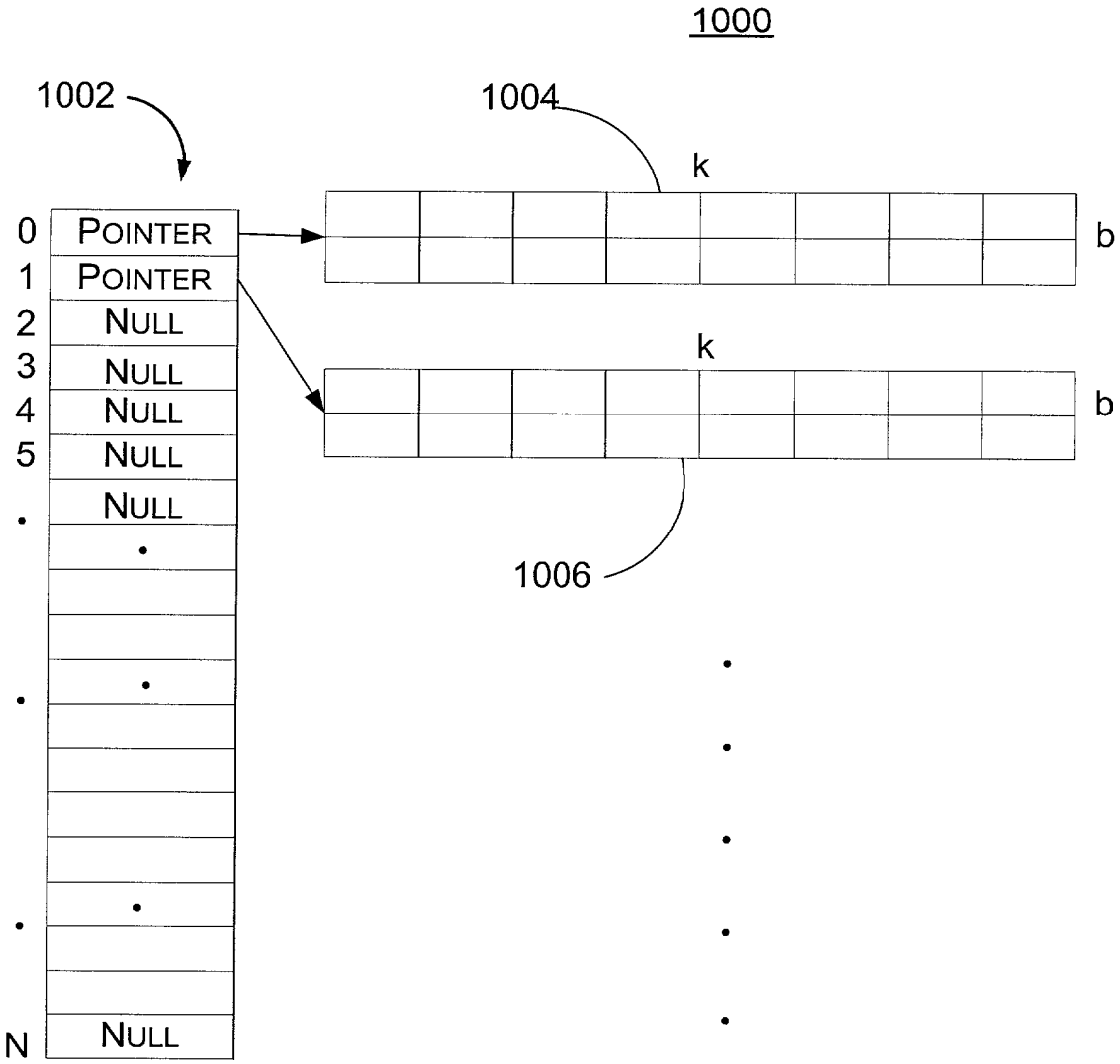

Fig. 10

20/220 * TS2/8001

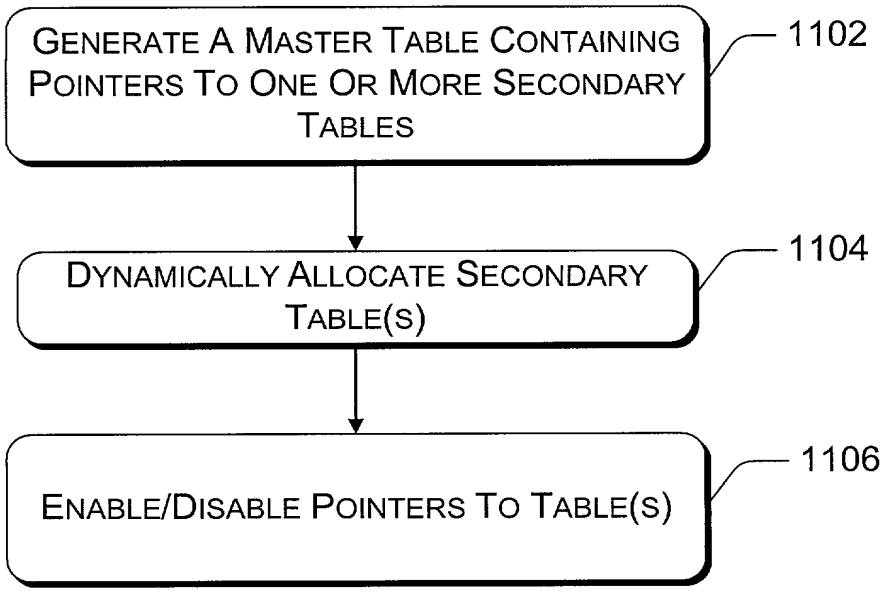
GENERATE A MASTER TABLE CONTAINING POINTERS TO ONE OR MORE SECONDARY TABLES
1102
1100
DYNAMICALLY ALLOCATE SECONDARY TABLE(S)
1104
ENABLE/DISABLE POINTERS TO TABLE(S)
1106

Fig. 11

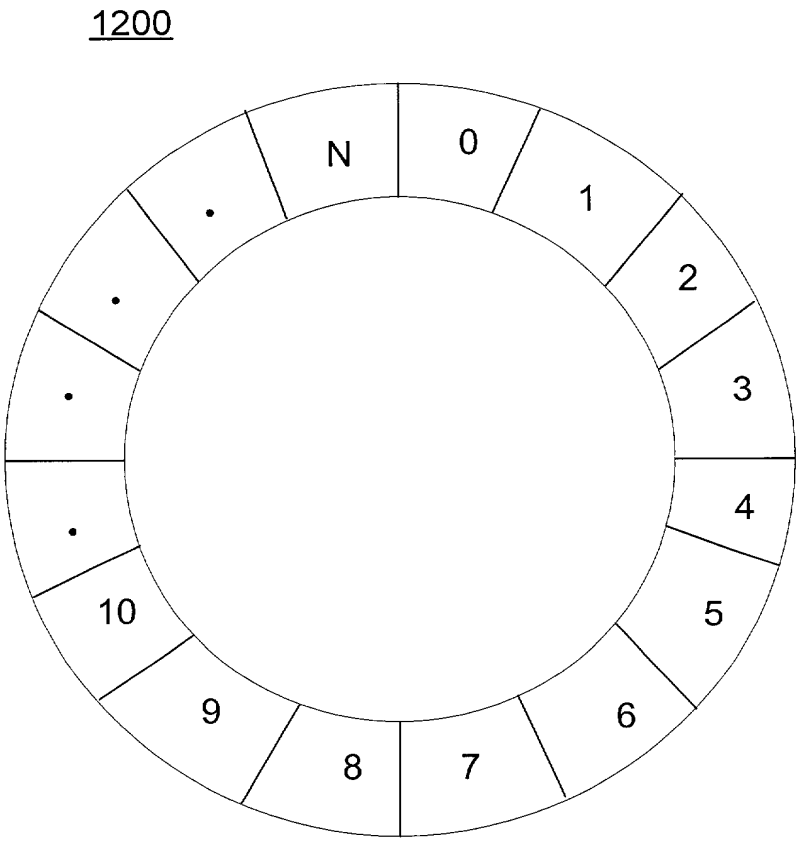
1200
N
0
1
2
3
4
5
6
7
8
9
10

Fig. 12

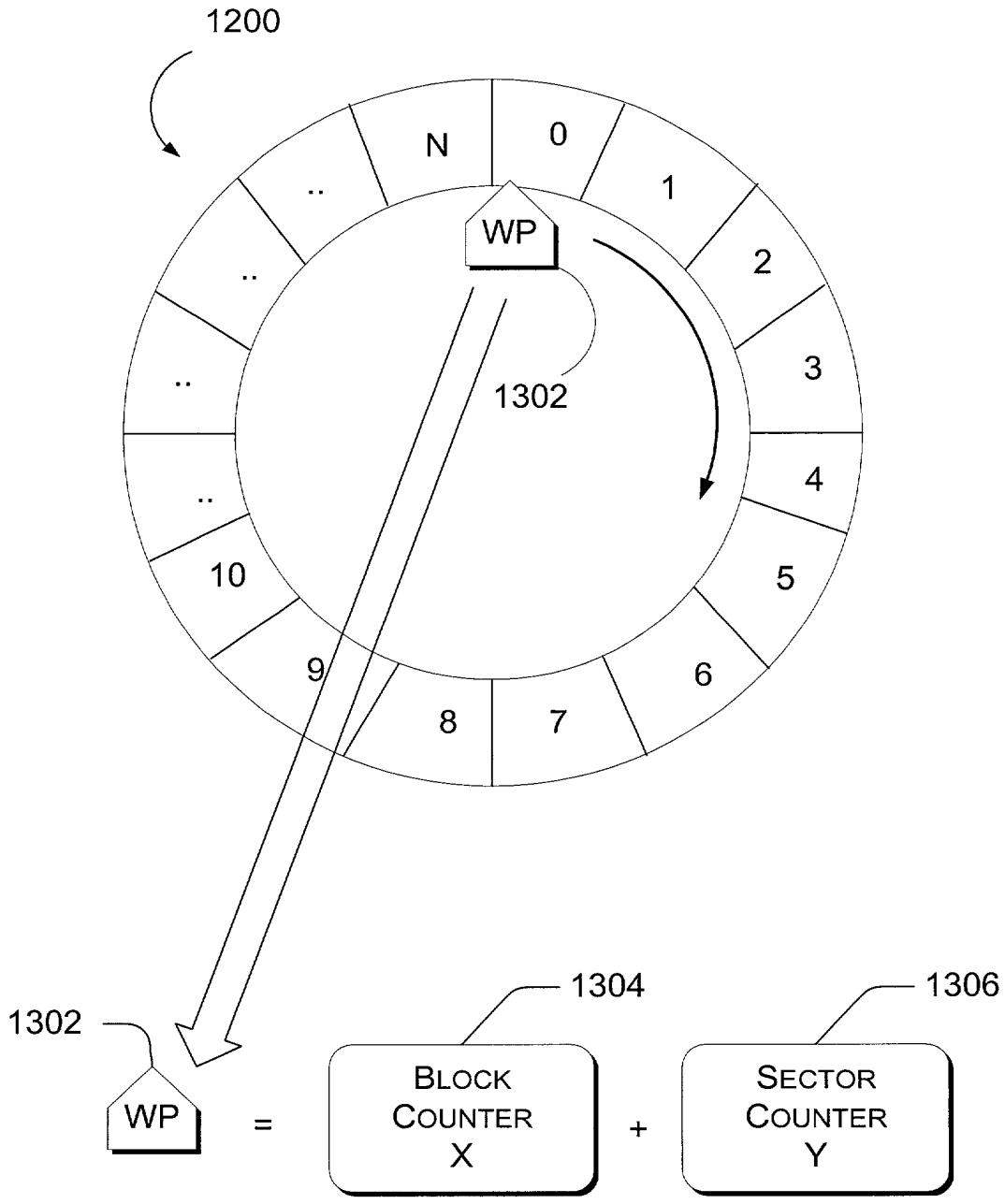
1200
N
0
1
2
3
4
5
6
7
8
9
10
..
..
..
..
WP
1302
1302
WP
=
1304
BLOCK COUNTER X
+
1306
SECTOR COUNTER Y

Fig. 13

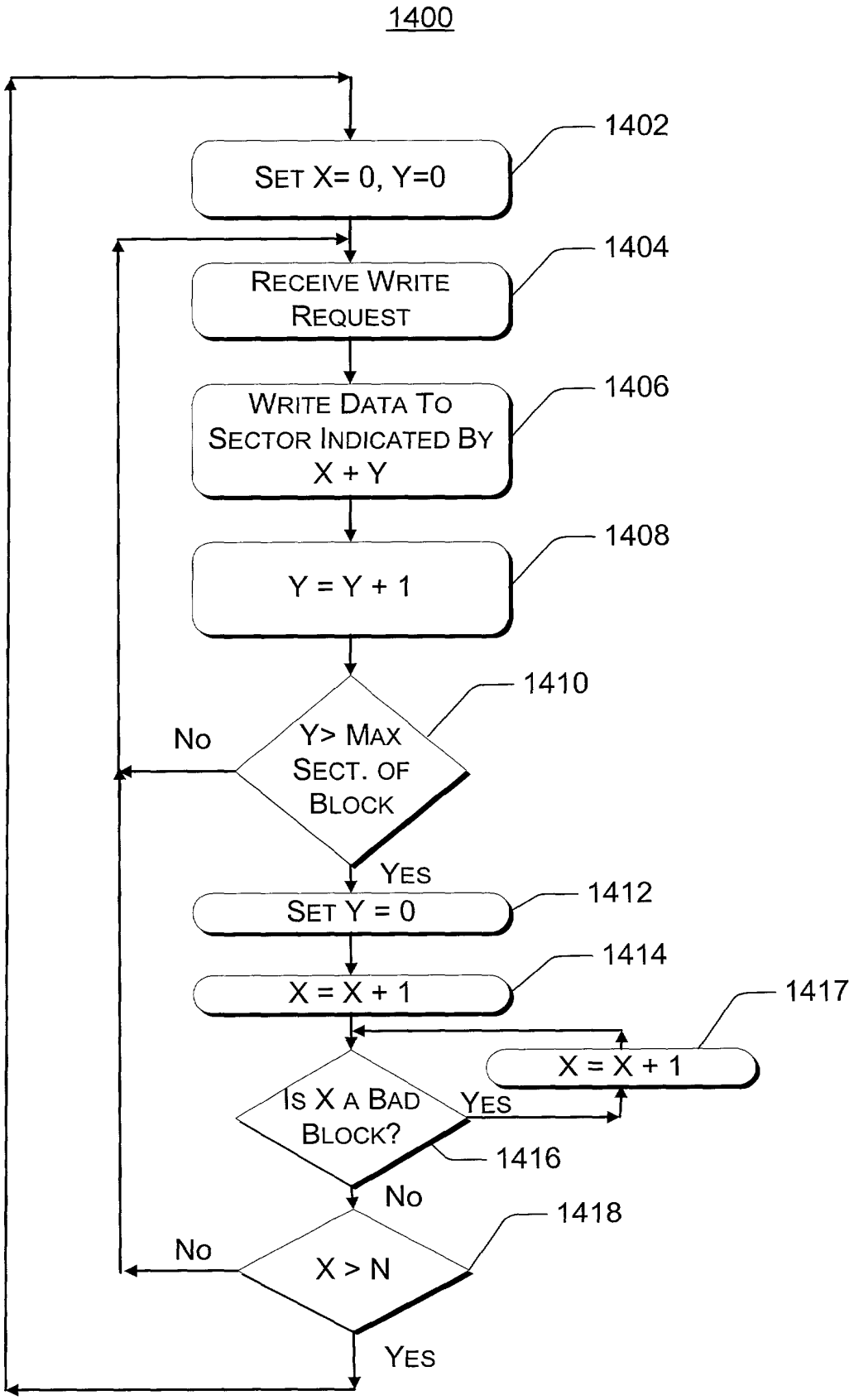

Fig. 14

20/22/2007 15:25:09 1008725

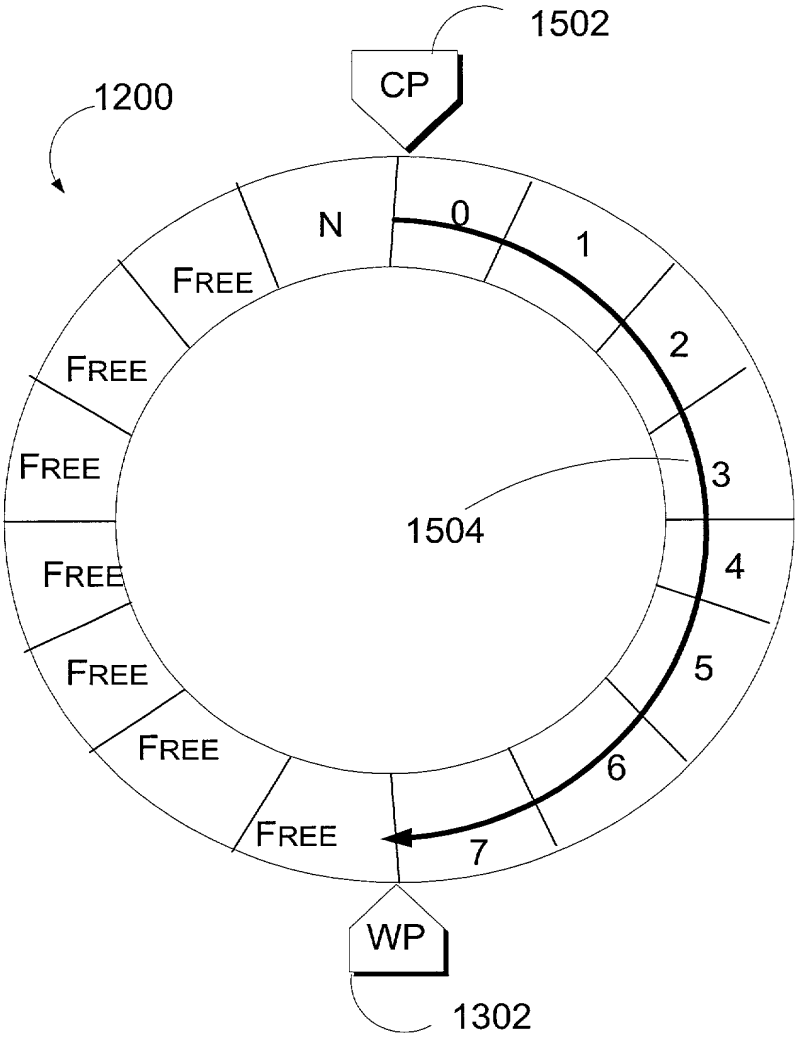
1502
CP
1200
N
0
1
2
3
1504
4
5
6
7
FREE
FREE
FREE
FREE
FREE
FREE
FREE
WP
1302

Fig. 15

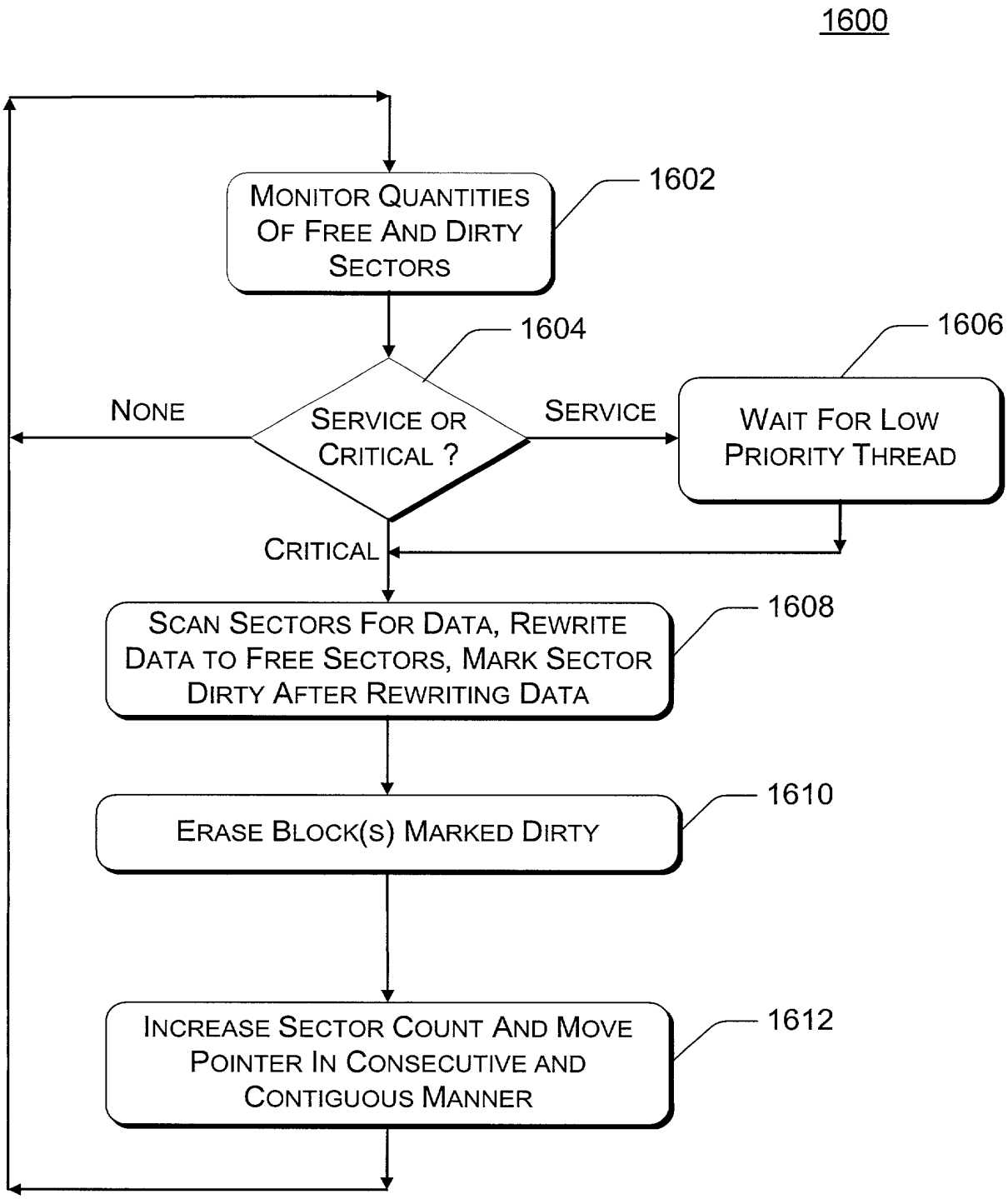
1600
MONITOR QUANTITIES OF FREE AND DIRTY SECTORS
1602
1604
SERVICE OR CRITICAL ?
NONE
SERVICE
1606
WAIT FOR LOW PRIORITY THREAD
CRITICAL
SCAN SECTORS FOR DATA, REWRITE DATA TO FREE SECTORS, MARK SECTOR DIRTY AFTER REWRITING DATA
1608
ERASE BLOCK(S) MARKED DIRTY
1610
INCREASE SECTOR COUNT AND MOVE POINTER IN CONSECUTIVE AND CONTIGUOUS MANNER
1612

Fig. 16

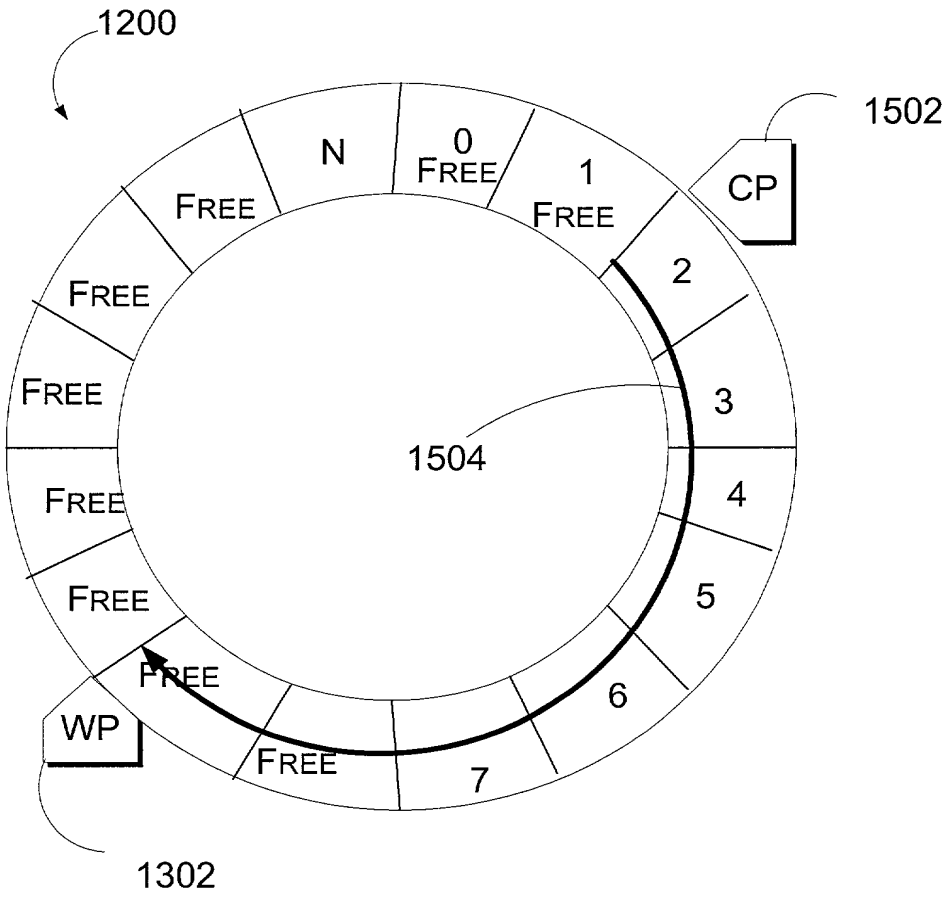
1200
1502
N
0
FREE
1
FREE
CP
FREE
2
FREE
3
FREE
1504
4
FREE
5
FREE
6
FREE
7
WP
1302

Fig. 17

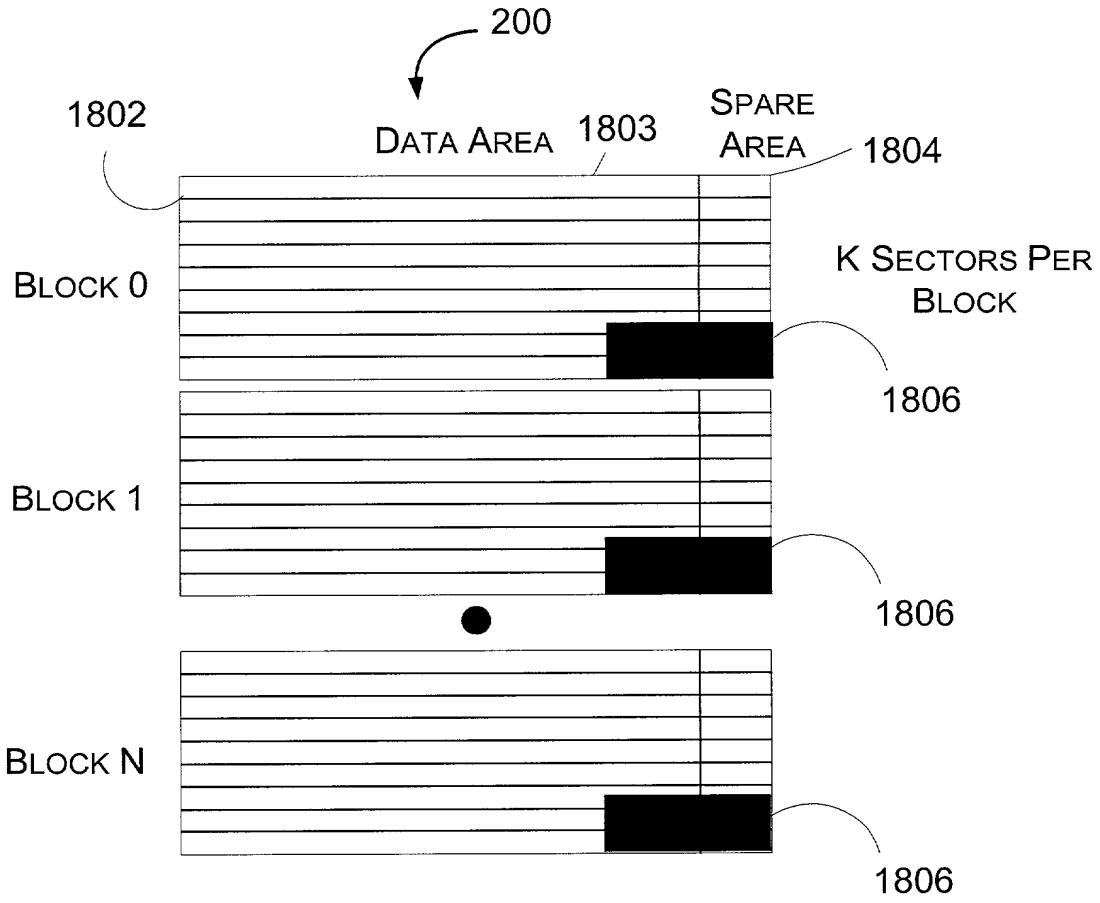

Fig. 18

20/22/0 T:52:29 007